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Three 3-day seminars on ways to utilize educational research were held in 1966 and 1967 for a selected sample of 60 educational leaders representing educational agencies, organizations, and teacher training institutions in Kentucky. Topics included research activities related to the research competencies of the participants, the research needs of the school districts represented, and the performance roles of the participants. Instruction was focused on the research process, elementary measurement and statistical methods, problem solving, and the use of research findings in the classroom. Aspects of preliminary planning, promotion, format, content, and materials of the seminars are described, and the series is evaluated with respect to both strengths and weaknesses. Appendices include publicity items for the series, a listing of participants, activity schedules for the three seminars, and evaluation reports. (JK)

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RESEARCH SEMINAR SERIES FOR TRAINING INSTRUCTIONAL LEADERS IN DEVELOPING AND UTILIZING RESEARCH

Final Report
Project No. 7-0250
Grant No. OEG-2-7-070250-1603

Donald E. Elswick

Dec. 1, 1966
to
June 30, 1967

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KENTUCKY DEPARTMENT OF EDUCATION

Frankfort, Kentucky

EA002141

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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INTRODUCTION

Type of Program

The research seminar series was conceptualized as a special training project directed toward the research needs of Kentucky's educational supervisors and a cross-section of administrative and teaching personnel who have important leadership roles in providing for the quantity and quality of the educational program in Kentucky. The educational research seminar series was conducted in three developmental stages: a 3-day seminar on December 1-3, 1966; a 3-day follow-up seminar, February 9-11, 1967; and a 3-day concluding seminar, March 30, 31, and April 1, 1967.

Significance of the Program to Education

The major forces affecting education in the decade of the Sixties are the outgrowth of the "new frontiers" in science and technology. It is significant that a national commitment to progress in science and industry and a better world for all people is expressed through the wise investment of the nation's resources in a continuing program of scientific research and development. In the remarkable decade of the Fifties, our nation experienced a gigantic transformation in the physical sciences. Tremendous economic growth was set in motion. Many new techniques and processes in industry were introduced. Compounding the impact of scientific advances on the schools were new social forces, including rapid growth and shift of population, which contributed to the further widening of the gap between the educational needs of society and the educational outcomes of the schools.

In the educational counterpart of the Fifties, particularly after Sputnik, the schools of America were the center of attention over the kind and quality of education that was being provided America's youth. Seemingly, the public was slow to recognize that the Nation's most precious resource--manpower--requires a lead time of perhaps twenty to twenty-five years before it can make an effective contribution to social, scientific and technological development. Seemingly overnight, educational lag which has always existed became a national concern with high priority. The real question is whether education can hope to serve effectively the world of work and a modern society without a research and planning component generally comparable to that required by science and technology.

The task of building a statewide educational research program is not a simple one. Money alone is not the answer. Many approaches will be required to break down inertia, erase inadequate patterns and practices, and establish a more favorable climate for a research-oriented program of education in the schools of the state. Over the years many deterrents have contributed to the lack of development of a research thrust in education. Among the forces is one which is internal to the professional education community. Rather than turn a portion of their energies to creativity, educational practitioners have given their entire effort to the ever-expanding pupil populations. In the past a paltry one-tenth of one per cent of its resources were devoted to research. Now, an emerging educational national concern and confrontation with the problems of education has resulted in the opportunity to extend educational research expenditures far beyond the trivial amounts available under less favorable conditions. A more demanding local citizenry, increased knowledge among educational practitioners, and increased communication within the educational community are conditions which have helped to produce willingness to try new solutions and to look for evidence of the superiority of one method over another. But this willingness is not generally accompanied by sufficient knowledge of the types and methods of research to apply them.

One of the important roles of State departments of education is responsibility for leadership in education through research. This role is clearly presented by the Study Commission (1) of the Council of Chief State School Officers:

> Research in the state department of education cannot be considered in isolation, just as the department does not function in isolation. Many organizations in addition to the department may be engaged in educational research within the state. Whether directly or indirectly involved, each is concerned with the implications of research for the improvement of education. Although the research interests and activities of these organizations may vary widely, each should have a part in the total state research effort.

The role is obviously one of cooperation, possible leadership, and the facilitation of the efforts of others.

In the face of local inability to apply research methods or to interpret research findings, an approach to fulfilling this responsibility must include efforts to up-grade the research capability of people who function in various roles throughout the State. Over the years, state departments independently and jointly with other agencies have presented a variety of research training projects. The Bureau of Research in the Pennsylvania State Department of Education, in 1962, prepared and presented a short seminar composed of five two-hour sessions dealing with statistical techniques. In Utah, the director of research in the State department of education and the directors of the bureau of educational research at the three universities jointly planned an in-service research seminar consisting of six half-day sessions. Three research seminars were held under the auspices of the Illinois Curriculum Program (ICP) which was organized to coordinate the activities of the many professional education organizations and groups within the State.

Basic needs in educational research which, for the most part, were deemed within the immediate purview of the research seminar series were:

1. Organizing for research. The improvement of research on a statewide basis is a task of considerable magnitude. Clearly the need exists for a cooperative effort. The organization of the project should function to get all the interested people and organizations, institutions, and agencies together to do the job. In Research in State Departments of Education, Bean (2) suggests that a desirable outcome of the organizing effort would be an overall coordinating function by an advisory council:

> The need for effective planning and coordination in any comprehensive state research program suggests the formation of a statewide educational research council...The structure of the research council may well vary from state to state...Where such an organization does not already exist, the state department of education should take the leadership in organizing an educational research council tailored to the particular research environment within the state.

2. Developing personnel. All leadership personnel in education and the teaching profession at all levels have a vested interest in research. It is generally agreed that there is no strict demarcation between the producer and the consumer of research. Research in education is best described as a continuum with its extremes generally defined as "basic" research and

"applied" research. The general misconception of a sharp dichotomy tends to obscure the fact that they merge in varying degrees. Effective "using" of research requires a general knowledge of "doing" research. Griffiths, (3) in assessing the needs for research in education administration, states:

> The first consideration, therefore, is how to bring better research abilities to bear on our problems. The place to begin is with those who are now doing research or who should be doing research.

3. Establishing a planned strategy for educational change. Planned innovation, according to Brickell, (4) consists of three phases: design, evaluation, and dissemination. For the most part, these three phases have not been separated in education; hence there is a lack of attention to the distinctive features of each.

The vast new project-centered resources provided by the Federal Government for improving and expanding education, particularly under Public Law 89-10, reflect a strong need for research-based competencies in planning, programming, and evaluating educational change.

4. Utilizing research. The utilization of research implies accessibility of research findings such as are now provided through the ERIC program of the U. S. Office of Education. Simple as it may seem, how to stimulate the use of research on the part of practitioners is a major undertaking. The responsibility is shared by educational administrators and supervisors generally but, to be effective, requires a one-to-one or small group relationship. School personnel that elect to carry forward a research problem or to apply research findings should have the benefit of close supervision and counsel in their initial efforts.

While efficient dissemination of information is essential and much research may be self-motivating, the need for dialogue and group discussion is needed to spur the research effort. Gallagher (5) states:

> Conferences are helpful in bringing researchers up-to-date on activities in their areas of interest. But even more important such conferences help the participants to sharpen their own ideas and concepts on the whetstone of comment by their peers. The conferences fill a genuine need of the research scientist by providing a sophisticated cross fertilization of ideas.

5. Upgrading research methodology. If research is to command a position of respectability in the educational world, it must meet acceptable threshold standards which, in the long run, are equally important to the consumer and to the producer of the research. It is generally agreed that much research in education has been and is incomplete in scope and quality. In describing "research that is not research," Griffiths lists policy research and action research as worthy endeavors, but in terms of methodology and purpose, it is lacking in the true sense of the definition of research. Corman (6), in a discussion of the topic, concluded:

> If we require, as a minimum condition, that a new methodology or technique gives us a new way of organizing or analyzing phenomena so as to lead to the generation and test of new hypotheses or to fresh ways of testing old ones, it is questionable if any of the features central in the thinking of the action researchers make much of a contribution to research methodology however great a contribution they do make to the in-service education of teachers.

Research Development-A Shared Responsibility

A wide range of organizational resources were available to provide the leadership and support components for the research seminar series. Among the agencies, institutions, and organizations having state-wide responsibility for the development of educational research in the schools of the state, in addition to the State Department of Education are: public colleges and universities generally and, in particular, colleges of education; and educational organizations, such as the Kentucky Education Association and its state affiliates, the Association for Supervision and Curriculum Development, and the Kentucky Association of School Administrators.

The State department of education staff has a wide range of educational competencies. The staff members possess varied backgrounds of training and experience at all levels of public education. Charged with responsibility for providing full educational opportunity throughout the state educational system, central office and field staff are in a unique position to stimulate, initiate, coordinate, and officially promote a broad program of educational research throughout the State.

The staff may conduct studies and surveys, give technical assistance, assist schools in evaluating innovations, provide statistical data, or engage in research dissemination, evaluation, and utilization at the classroom level.

The colleges and universities have an enormous research potential which they may provide to others concerned with research; particularly, when they are requested to help. The colleges of education are increasingly more active in helping school districts through project research carried on in the universities, preservice and in-service training programs, and direct school services.

The teacher-training institutions that maintain laboratory schools--Eastern, Western, Morehead, and Murray among the universities are in a most favorable position to relate basic research to applied research in campus as well as near-by cooperative schools serving to train student teachers. University specialists in research and in the various subject fields frequently serve as consultants to local districts in carrying on research projects. Cooperation of these groups was assured for the research training seminars.

Selection Criteria and Participants

In the planning phase for the seminar series, it was estimated that the potential number of eligible applicants counting one from each of Kentucky's 200 school districts, university laboratory schools, and non-public administrative and supervisory units was approximately 225. A copy of the general letter of invitation and application form forwarded to the several agencies, and special schools are shown in Appendix A. The general selection criteria were as follows:

1. Supervisors, administrators, and teachers who are employed full-time by school districts, teacher-training institutions including laboratory schools, and committee chairman of teacher organizations who have, or expect to assume, responsibility for research and/or program development functions, or to assist in the expansion and improvement of an existing research program in one or more schools of the districts.

2. All applicants shall have the master's degree and a minimum of two years of successful teaching or administrative experience, and be recommended by the appropriate agency or institution.

3. Applicants previously or currently enrolled in any Title IV (P. L. 89-10) program for the preparation of educational researchers, such as institutes or graduate training programs are not eligible as participants.

The following specific criteria were applied in the final selection of the sixty participants to attend the seminar series:

1. Official endorsement of agency or institution desirous of initiating or augmenting a local research program full-time, part-time, or to assign coordination of research services in the district or in a school to a staff member in addition to regular duties.

2. Agency or institution recognizes the need for more key personnel to have formal training in research with the seminar serving as a prerequisite for institutes and/or further graduate study in research.

The listing of the persons enrolled in the Research Seminar Series, their area of specialization, and geographic distribution by counties is shown in Appendix B.

Objectives of the Research Training Project

The general purpose of the seminar series was to provide instructional and workshop experiences for a carefully selected sample of Kentucky's educational leaders. These experiences had as their goal the improvement of the knowledge of participants to make behavioral changes possible. Among the primary objectives were the following kinds of behaviors:

1. To be able to communicate to others a research attitude and understanding of the contribution of research to improved practices

2. To be able to conceptualize the school as a setting for research

3. To be able to identify a problem encountered in a local school system in sufficient and appropriate detail to provide researchable or developmental elements

4. To be able to designate the significant variables in a problem, select independent and dependent variables, and select reasonable measures of these variables

5. To be able to select a research design suited to the problem and exercising maximum control within the limits imposed by the school setting

6. To be able to select a sample which will reduce errors as much as possible in the school setting

7. To be able to understand the basis of measurement in the scientific study of educational problems

8. To be able to understand the basis for confidence levels in the testing of hypotheses.

Examples of specific objectives set up for the Research Seminar Series were the following kind of behavior:

1. Participants can define research (different types)
2. Participants can discriminate between research and non-researchable activities
3. Participants can give examples of hypothesis, significance, validity, reliability, etc.
4. Participants can define a researchable problem
5. Given a problem, participants can critique a "relevant" design
6. Given an explanation, participants can write hypothesis to test explanation
7. Given a piece of research, participants can discriminate between findings, conclusions, and implications
8. Given a criterion, participants can state a plan for testing its reliability and validity
9. Given a set of data, participants can compute a correlation coefficient
10. Given a test review, participants can identify reasons for choosing or not choosing a test
11. Participants can name strengths and limitations of research process
12. Participants can state reasons for review of literature

The program for the research seminar series was predicated on the assumption that concentrated instructional and workshop experiences could move the participants toward realization of these objectives.

DESCRIPTION OF THE PROGRAM

The program of the research training project was organized to attain the behavioral goals as outlined in the preceding section. The strategy for using a functional approach was determined cooperatively by the Seminar staff in a one-day planning session held two weeks prior to the first seminar. It was generally agreed that a cross-section of research activities directly related to the research competencies of the participants, the research needs of the school districts, and the performance roles of the participants would provide the most satisfactory operational pattern.

There are several other considerations which predisposed a unique structure for the seminar series:

1. Perspective acquired from previous seminars

(a) In 1964 and again in 1965, a single research seminar of shorter duration was sponsored by the Research Commission of the Kentucky Association of Supervision and Curriculum Development and the Kentucky Department of Education. Then as now, the principal consultant and state and local leaders were available to provide leadership and lay the foundations for the expanded series in 1966-67.

(b) A distinctive feature of the new series of three seminars in addition to greater scope and depth, was the combined seminar-practicum under field supervision. Throughout the series research utilization remained as the departure point but not without a major effort to establish understanding and interpretive skills, at least in embryonic form, of how "new" knowledge is produced.

2. The element of time remained important because

(a) A short but concentrated seminar must have a focus upon a discrete and comprehensible topic for which some closure can be realized in the available time.

(b) The extended period of time between seminars could be either a liability or a valuable asset depending on whether the principle of reinforcement was made fully operational through planned interim activities and full opportunity for feedback by the participants.

(c) An optimal balance between a self-contained seminar and adoption and use of the principle of continuity in a series of seminars would be required for maximal effectiveness. An increasing growth of participants ought to be assumed and the level of knowledge required for each successive seminar raised accordingly.

3. A cross-section of educational leaders in Kentucky was available, both as staff instructors and consultants, to bring a wide array of interests, outlooks, and professional support to the experiences to be provided. Research directors on the seminar staff representing the six universities across the state and other educational leaders were interested not only in immediate benefits that could accrue to the school districts of the state but also in furthering long-range plans for a state research organization and increasing research training capacity through providing additional preservice as well as in-service research training opportunities.

Within the framework of time, purpose, and perspective the content and methodology of educational research was divided into instructional units suitable for the three research seminars along the lines of spiral curriculum design. The program areas are briefly described under the following headings: content of the seminars, the instructional plan and research seminar staff.

Content of the Seminars

Common research strands running through the three seminars were research process, measurement, statistical techniques, problem development and solution, and research information. The scope and sequence of program content is indicated by the topics receiving specialized treatment in the separate seminars.

Seminar I. The topics of discussion and workshop experiences directed toward specific bahavioral goals and presented in general sessions and small group work sessions were as follows:

1. Developing an interest and concern for educational research
2. The research process: hypothesis, evidence and inference
3. Threats to research design
4. Measurement: reliability vs. validity, and types of reliability

5. Ways of assessing validity

6. Problem development and solution

7. Information and retrieval systems (ERIC); demonstration and use of ERIC program materials.

A copy of the Schedule of Activities for Seminar I is shown in Appendix C - 1.

Seminar II. The following topics and types of workshop experiences with appropriate review of the previous level of content were presented in the second seminar:

1. Dry run research procedure: problem selected by small group would require a simple sort of analysis -- chi square, t-test, rank-order correlation, et cetera.

2. Measurement alternatives in perspective; interaction analysis, semantic differential, content analysis, Q-sort, questionnaires, rating scales, other. Instructors presented rationale for the measuring devices and examples of their use where appropriate. Also, examples of researches using these instruments were prepared in advance.

3. The null hypothesis model for decision-making

4. Null hypothesis practicums to help participants work on independent projects: Track A, Problem definition; Track B, Research design; Track C, Statistical analysis; and Track D, Measurement.

5. Research strategy and tactics for advancing education in Kentucky

6. Marshalling research resources.

A copy of the Schedule of Activities for Seminar II is shown in Appendix C - 2.

Seminar III. The concluding seminar in the series dealt with expansion of content only to the extent considered desirable by the Seminar staff in filling in gaps and providing help in problem development. Major emphasis, however, was focused on needs of participants as expressed in feedback from previous seminars. Major content areas in Seminar III were:

1. Sampling design in education -- introduction to probability theory, population vs. sample study, requisites of a good sample, sampling procedures, bias in estimation, control of random sampling error, and planning a sampling study

2. The problem of prediction -- regression theory, relation to correlation theory, principle of least squares with application to test scores and school enrollment projection

3. Literature search and how to do it

4. Major types of research including applicability to local school problems

5. Dry run research procedure using real data

6. Review of measurement designs and statistical techniques

7. Cooperative development of educational research programs with emphasis on meeting needs of local school systems.

The published Schedule of Activities for Seminar III is shown in Appendix C - 3.

Interim and post-seminar activities. In the interim and post-seminar periods, the instructors and state department staff participating in the seminar program were available for follow-up and supervision of projects undertaken, local workshops, and small group or individual consultation as requested by participants. The time interval between Seminar I and Seminar II was nine weeks; Seminar II and III, six weeks; and Seminar III and end of grant period, twelve weeks. Most requests for consultant help in the interim periods were handled by letter or telephone. Four post-seminar activities were held.

The Instructional Plan

Within the Seminar format a variety of instructional techniques and curriculum resources were utilized to encompass the content and to provide a high degree of individualized instruction. Skills and concepts were presented by many types of differentiated instruction: lecture, panel, symposium, demonstration, guided study, self-instruction and A-V instruction. Patterns used for group instruction were: general sessions, small groups randomly assigned, and interest groups on an open-choice basis.

The general format and time allotment by types of activity for the three seminars are shown in Table 1.

TABLE 1

RESEARCH SEMINAR SCHEDULE

Day of Week	Instructional Schedule		Hours
	Hour	Activity	
Wednesday	4:00-7:00 p.m.	Registration	-
	7:00-9:30	Dinner and Lecture	2.5
Thursday and Friday	8:00-10:00	General Session	4
	10:30-12:00	Small Groups	3
	12:00-1:00	Noon	-
	1:00-3:00	General Session	4
	3:30-5:00	Small Groups	3
	7:00-9:00	General Session	4
Saturday	8:00-10:00	Small Groups	2
	10:30-12:00	General Session	1.5
Instructional time per seminar			24
Total instructional time for seminar series			72

Instructional resources included a wide range of published and specially-prepared interim work-study materials, an exhibits section, and consultant services available during interim and post-seminar periods.

Published materials. In order to have available for study and reference during the interim period and seminar sessions, the following selected textbooks were made available for purchase and/or use by the participants and also recommended for inclusion in the school districts's professional library:

Van Dalen, D. B. Understanding Educational Research. New York: McGraw-Hill Co., 1966

Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, 1964

Gage, N. L. (ed.) Handbook of Research on Teaching. Chicago: Rand McNally and Co., 1963

Bibliographies and other textbooks and references were made available at each seminar through the libraries of schools and universities in the region and the professional library of the Kentucky Department of Education.

Specially-prepared interim work-study materials. In addition to a wide variety of materials placed on exhibit at the seminar sessions, multilithed work-study materials were prepared by the staff for mailing to participants two to three weeks in advance of each seminar. Extra copies were also made available to participants at seminar sessions for binding in loose-leaf notebook form. The extent and type of content provided through work-study materials are indicated in Table 2.

TABLE 2

SPECIALLY-PREPARED WORK-STUDY MATERIALS SUPPLIED TO PARTICIPANTS THROUGH MAILOUTS DURING INTERIM PERIODS

Topic	Pages	Topic	Pages
Chi-square	8	Scales, rating	4
Content analysis	2	Semantic differential	2
Cooperative Research Program	5	Sign test	3
Correlation	3	T-statistic	6
ERIC	12	Research on reading	8
Evidence	19	Research abstracts, selected	
Hypothesis	17	(AERA-1967)	13
Inference	18	Research books	
Inductive process	6	(AERA listing 1967)	14
Interaction analysis	6	Research studies and reports	
Literature search		Kindergarten	14
(chapter from dissertation)	55	Team teaching	8
Problem solving approach	4	Taxonomy for ed. change	5
Proposal writing outline	5	Factors in readiness	
Dissertation proposal	13	for change	13
Q-sort methodology	9	Research problems	3
Research design and		Regression analysis	13
proposal writing	18	Total pages	390
Research publications sources	3	Total topics (30)	

Exhibits section. Other than published materials, a display of microfilm equipment and ERIC program materials was provided. Microfiche readers, reader-printers, copies of Research in Education, and the microfiche collection on Education for the Disadvantaged were made available to participants in order that they might acquire through demonstration and use new insights on the potential of the ERIC program for the dissemination and diffusion of educational research.

Consultant services. A unique feature built into the research training project was the provision for consultant services during the interim and post-seminar period. The six instructors representing the state universities and two State Department of Education staff members were available for district-wide meetings, small group conferences preferably on a regional basis, and special assistance to participants. The special meetings and programs that were set up met all criteria but unfortunately the timing of the seminars limited the effectiveness of this phase of the project. Approximately 75 per cent of in-service education programs in Kentucky's 200 school districts are conducted in the early part of the school year. Also, the increased tempo of regular school and university activities in the spring for the consultant staff and participants alike tended to accentuate the timing problem.

Research Seminar Staff

Principal Consultant and Administrative Staff

Dr. James D. Raths, principal consultant; Director of the Bureau of Educational Research and Field Services, University of Maryland

Dr. D. E. Elswick, project director; Director of the Division of Educational Research, Kentucky Department of Education

Mrs. Mary Marshall, publicity; Director of Division of Information and Publications, Kentucky Department of Education

Mr. Samuel Sears, Jr., assistant project director; Research Associate, Division of Educational Research, Kentucky Department of Education.

Instructors

Dr. R. Dean Acker, Associate Professor of Education and Director of Research, Eastern Kentucky University

Dr. Donald J. Clemens, Coordinator of Research for the School of Education, Murray State University

Dr. Henry N. Hardin, Director of Educational Research, Western Kentucky University

Dr. Robert D. Neill, Assistant Professor, University of Louisville

Dr. Morris L. Norfleet, Director of Research, Morehead State University

Dr. Ivan L. Russell, Associate Professor of Education and Coordinator of Research, College of Education, University of Kentucky

Consultants and Lecturers

Mr. Samuel Alexander, Deputy Superintendent of Public Instruction, Commonwealth of Kentucky

Dr. Kenneth Estes, Superintendent, Owensboro City Schools

Dr. Wade M. Robinson, Executive Director, Central Midwest Regional Educational Laboratory, St. Louis

Dr. Harry M. Sparks, Superintendent of Public Instruction, Commonwealth of Kentucky

Special Guests

Mr. Daniel S. Arnold, Associate Research Specialist, Kentucky Research Coordinating Unit in Vocational Education, College of Education, University of Kentucky

Mr. Billy Braden, Assistant Director of Guidance Services, Kentucky Department of Education

Mr. Charles Bratton, Director of Division of Computer Services, Kentucky Department of Education

Dr. Charles C. Clark, Director, Office of Extension and Field Services, Western Kentucky University

Dr. Raymond L. Cravens, Vice President for Academic Affairs and Dean of the Faculties, Western Kentucky University

Mr. Arnold Guess, Director, Division of Statistical Services, Kentucky Department of Education

Dr. James Johnson, Associate Professor of Education and Supervisor of Student Teaching, Morehead State University

Dr. Carl Lamar, Director of the Kentucky Research Coordinating Unit in Vocational Education, College of Education, University of Kentucky

Mr. James Melton, Assistant Superintendent for Administration and Finance, Kentucky Department of Education

Mr. George Rush, Assistant Director, Division of Statistical Services, Kentucky Department of Education

Mr. Claude Taylor, Coordinator of Evaluation, Bureau of Instruction, Kentucky Department of Education.

EVALUATION OF PROGRAM

The evaluation of significant aspects of the Educational Research Training Program is described in terms of program components, major strengths or unique features, major weaknesses or difficulties, overall appraisal, and recommendations.

Program Components

Logically, the appraisal of the means, processes, and outcomes of the Kentucky Research Seminar Series for 1966-67 should start with objectives. In turn, the extent to which the objectives formulated can be achieved will depend largely upon the type and quality of key supporting components; program content, organization, professional staff, selection of participants, and budget.

Objectives. Educational objectives were defined operationally in terms of behavior and reflected, in the main, a practical approach centered on the known or assumed needs of participants. The decision to place major emphasis on a few sharply defined objectives was based on experience gained in conducting previous research seminars and a general knowledge of the preparation and experience of educational leaders in Kentucky schools. Above all, it was recognized that the ultimate criterion of the effectiveness of educational objectives is behavioral change.

A review of the objectives with reference to programing and staff assignment was made by the instructional staff in a one-day planning session two weeks prior to the first seminar. At that time, it was agreed that further delineation of the stated objectives would help to sharpen focus on content and increase the effectiveness of means and processes particularly in Seminar I. This, in turn, helped to establish a working pattern for succeeding seminars. With the above-mentioned modification, the objectives were considered realistic and sound.

Several opportunities were provided for the participants to share directly in the evaluation of objectives; among them, an open-end evaluation form was provided for participants following each seminar, and a self-rating scale was constructed to provide an indication of post-seminar knowledge and understandings of selected terms and concepts. Inasmuch as total program aspects were reported on, these appraisal efforts are discussed in a later section on overall evaluation.

It was believed that the objectives of the seminar series were adequately achieved in terms of the expectations of those who planned and conducted the seminars. The quality of participation, the enthusiasm of participants, and progress made in carrying out assignments exceeded by far the accomplishments of earlier groups in similar seminar settings in Kentucky. The difference can be attributed, in large part, to the quality of planning beginning with the operationally-oriented statement of objectives.

Program content. A critical area in the implementation of the Research Seminar Program calling for clear-cut decisions was the selection and use of appropriate subject matter to accomplish the stated objectives, and the need to properly delimit the breadth and depth of the content to fit the time schedule for a short but intensive seminar period. It was recognized that any textbook approach would be quite inappropriate for seminar use but that a careful selection of modern texts and references should prove to be a most valuable resource. The need for seminar-oriented packaged materials had been encountered in previous two-day research seminars in 1964 and 1965. The need then was met satisfactorily by adapting course content through handouts provided by the principal consultant. Expanding the pattern to include a broader range of topics, specific items of materials were prepared by Dr. Raths and other members of the instructional staff team and packaged separately for each seminar. The selection of topics and method of packaging were reported on quite favorably by participants in seminar evaluations and letters.

The focus of program content throughout the seminar series was on developing a threshold level of understandings, attitudes, and appreciations along with the capabilities required to meet the more common research needs encountered by instructional leaders in Kentucky school districts. Program content was enhanced immeasurably by the quality of presentation.

Seminar staffing. A distinctive feature of the research seminar series was the superior capability of staff. Their previous experience in school research, and current responsibilities for teaching or directing research and conducting a wide range of research training activities provided a unique background for understanding the research needs of the participants.

The informal nature and high quality of general session presentations were greatly appreciated by the participants and generously reported on throughout the Seminar Series.

The staff-trainee ratio for small discussion groups was adequate to provide for individualized instruction, maintain a high interest level, and elicit a high degree of interaction.

Special guests, consultants and speakers were invited from the Kentucky Department of Education, the Central Midwestern Regional Educational Laboratory, the Owensboro School System, Western Kentucky University, and the Kentucky Research Coordinating Unit for Vocational Education. All guests and special consultants made significant contributions to the developmental aspects of the research training program and the long-range planning for research and development in Kentucky. They also demonstrated their interest and support by participating in regularly-scheduled program activities as their time and schedules permitted.

In directing another seminar series or similar program, an effort would be made to maintain the same balance and composition of staff. Generally, the same assignments would be made with a strong suggestion that a principal consultant team share the arduous general session teaching assignments. The present pattern of selecting the principal consultant from out-of-state and supporting staff from the state's six strategically-located universities provides a significant element of strength for organizing and promoting research development in the state and should be continued.

Trainees. The number of trainees on stipend was limited to 60 participants selected from a possible 225 applicants representing the several eligible categories of agencies, organizations, and teacher-training institutions in the state. The selection criteria forwarded to local administrative personnel along with the letter of invitation provided an objective screening pattern which was well received at the local level. While concern was expressed that many of the applicants could not be accommodated, interest and support for possible future seminars was assured. Where the criteria screened out key personnel employed in developmental programs such as coordinators and evaluators, a limited number was admitted to the research training program as observers on request of local school administrators.

A class size of ten participants with a possible range of eight to twelve was found to be reasonably adequate to provide for individualized instruction and to permit coverage of the exercises and discussion material introduced in the general session.

From an administrative point of view, the off-season State and National park facilities provided an ideal retreat-type setting. There were no commuter problems. With some improvising for small discussion groups, the meeting space available was generally adequate.

The selection criteria contributed directly to research development by providing a desirable cross-section of leadership positions in terms of wide geographic distribution, professional points of view, levels of professional leadership, comparable levels of academic preparation, and a general interest in educational research.

Organization. From the standpoint of timing, the scheduling of the three 3-day seminars in early December, early February, and late March, was generally satisfactory. No conflict with state meetings was encountered and only two overlapping dates with national meetings posed problems for four or five participants who would normally attend.

Travel time on the part of some participants required approximately six hours and necessitated departure by noon on Wednesday. The original schedule called for an opening session at 8 A.M. on Thursday. To smooth out the time problem, a change in the schedule was made to add a two and one-half hour session on Wednesday evening and move back the closing hour on Saturday from 2:30 P.M. to 12:00 noon for the mutual benefit of participants and staff and the overall improvement of the research training program.

Timing problems encountered in terms of the research practicum or field supervision by staff were of a more serious nature. With many of the school districts closing out schools some six weeks following the third seminar, pressures mounted and little time was available for participants or staff for designing research projects or assisting teachers through in-service type activities. Activities of this type and consultant services to help meet them, are in demand in the fall when most district-wide sessions are held by the 200 school districts. The four field projects that were conducted by members of the staff on request of participants were varied in type, of considerable value to the sponsoring group, and exemplary in nature to the extent of serving as models for future field activities in research.

An example of the stimulation provided by the research practicum phase is reported on in a letter to the program director by W. W. Bolton, Supervisor of Instruction, Bourbon County Schools:

> As a result of the seminar, I was stimulated to organize an in-service education program for the Bourbon County Schools that will emphasize the utilization of research findings. We have been making decisions about teaching, organization, and curriculum without ever really searching the literature to determine the degrees of success and/or failure or the limitations about changes in curriculum, organization, or teaching methods found elsewhere. We have never actually tested out any of these changes to determine their success or failure in our school system. This program marks the initiation of systematic instructional decision-making in the Bourbon County Schools. Dr. Raths emphasized this need in our first conference at Cumberland Falls and then gave me helpful suggestions and encouragement for starting this type program. The work we did in the seminar series gave me the confidence that we could carry out such a program.
>
> Our first conference held April 10-11, 1967 was highly successful. Dr. Norfleet and Dr. Russell both contributed heavily to this success and I thank you for providing them.
>
> I believe that in order for school systems to properly utilize research findings they must have an in-service education program that provides the proper setting and focuses on using findings that relate to a particular problem or interest within the school system. To just provide the research literature through ERIC or some other means and hope teachers will read the material is not enough.
>
> Our program is focusing on the teaching act or process. This gives us the flexibility needed to plan activities to reach all teachers. We can instruct teachers in the use of interaction analysis as derived from such studies as those of Flanders, Hughes, and Smith; the taxonomy of educational objectives developed by Bloom et al; content analysis; instructional models and others too numerous to mention.

Budget. The budget categories were reasonably adequate to provide the level of services agreed upon in a cooperative enterprise. Of the several budget items, the trainees allowance for travel was insufficient to reimburse participants at the regular state rate of eight cents per mile. However, the pooling of transportation for the second and third seminars, as the participants became better acquainted, tended to balance out transportation costs. The stipend was adequate, in most instances, to provide for living expenses at the reduced off-season park rates. Inability to use the funds budgeted for field supervision representated a ten percent reduction in the overall cost of the research training program.

Major Strengths of the Program

Several features of the research seminar series possess varying degrees of uniqueness or exemplified elements of strength worthy of special mention.

1. Cooperative approach. Theoretically and practically, educational research must be the legitimate concern of all agencies, organizations, and institutions of higher education having responsibility for teacher preparation programs or providing educational opportunities for children and youth. Moreover, the development and use of educational research by its very nature is a cooperative enterprise. Broad support was manifested by the working relationships established among several groups having varying degrees of responsibility for educational research in Kentucky--school districts, colleges and universities, and the State Department of Education. Lines of communication and better understandings were established for continuing a partnership approach in order to serve more efficiently and effectively the research needs of Kentucky schools.

2. Capacity of staff. Through a combination of professional backgrounds and experience, the staff provided an interdisciplinary base of knowledge for the seminar program. The competency, enthusiasm, understandings and attitudes of the instructional staff were generously acknowledged by participants through seminar evaluation reports. A large part of the effectiveness of the seminar series can be directly attributed to the quality of general session presentations and the high level of follow-up activities under the direction of the instructional staff. There were other values inherent in staff selection: 1) continuity of research training was provided by the principal consultant who had conducted previous seminars and conferences in Kentucky, and 2) the instructors from university centers across the state had already established working relationships with many of the participants.

3. Interest of participants. Participants had enrolled in the seminar program with high expectations and the interest displayed indicated that they were not disappointed. The many participants who became sincerely involved and interested in the seminar proceedings were, in a real sense, a measure of the success of the seminar program.

4. Organization. The pattern of organization which featured three 3-day seminars with built-in field supervision in interim periods over a total span of 4 to 6 months was unique in two respects: 1) general adherence to the concept of continuity, sequence, and integration of learning experiences across a time interval spanned by a research practicum, and 2) an opportunity for participants under direction to apply research or to pursue a systematic and sustained inquiry of a researchable problem growing out of their teaching or administrative experiences.

Major Weaknesses of Program

Major difficulties encountered in conducting the research seminar program stemmed, in the main, from timing problems, emergency conditions, and dissimilarity of trainee background.

What amounted to forced scheduling of interim and post-seminar activities in the busiest time of the school year for participants and instructors alike was generally unsatisfactory for the proper development of the research practicum phase. The intention was to provide consultant help to participants who had a systematic inquiry underway or in the planning stage and also to assist in developing research awareness and understandings among teachers and administrators. The activities that were conducted were well received and demonstrated the potential strengths of the research practicum. However, the facts are that the expectations of six months were more nearly the hoped-for realities of twelve months or more.

Emergency conditions reflecting a combination of factors not wholly unexpected provided the second type of difficulty. The time between project approval and the first seminar was insufficient to avoid scheduling conflicts of one day each for two instructors. Capable replacements were provided then and for one day later for one instructor. The short break in staff leadership and the possible disappointment experienced by some participants were preferable, in this instance, to the loss of a capable instructor for the seminar series.

Severe weather conditions in eastern Kentucky along with illness contributed to the emergency withdrawal of six participants just prior to Seminar II. Six new appointments were made from participants equally eligible and who had attended Seminar I on own expense account. Thus, the unexpected loss was balanced out and the quota of sixty participants was maintained.

Dissimilarity of trainee background. Variability in background of participants was more pronounced than expected from the data on application forms showing preparation and experience. Major factors which seemed to relate most directly to dissimilarity were recency of formal training and whether or not participants had attended previous research seminars or other short-term training activities in the past two years. From the extent and quality of participation in Seminar I and comments in self-evaluation reports, it was estimated that approximately 85 percent of the participants felt the level of difficulty and pace were about right. Changes were made to incorporate many of the recommendations of the participants, particularly variations in grouping pattern and more individualized instruction.

Overall Evaluation

Impressions of specific aspects of the Research Seminar Program have been discussed in previous sections of this report. The several "parts" with their degrees of strength were mutually reinforcing to the extent that staff and participants alike considered the seminar series a satisfactory learning experience and a sound foundation for expanding short-term research training activities in the state.

The participants contributed directly to an overall evaluation of the Seminar Program through general evaluation reports and a self-rating scale designed to indicate the participant's judgment of his level of knowledge and understanding of a cross-section of terms and concepts selected from the program content.

Following each seminar an evaluation form was mailed to participants requesting reactions and comments which would help to reveal strengths and limitations of the instructional plan as well as recommendations for increasing individual and group values which the staff should strive for in the next scheduled seminar. A copy of the general evaluation form is shown on the following page.

Most participants were unusually adept at combining praise and criticism. Therefore, the reactions, comments, and recommendations were best classified into two broad categories; generally favorable, and generally unfavorable. Excerpts from a cross-section of responses reveal the several categories of strengths and weaknesses as viewed by the participants.

GENERALLY FAVORABLE

The enthusiasm, knowledge and skill of Dr. Raths made the general sessions outstanding. Educators of over 30 years experience were

CONFERENCE EVALUATION
Research Seminar I - December 1-3, 1966
Cumberland Falls State Park

Participants and Observers:

Please help the staff to evaluate Research Seminar I by indicating what you feel were strengths and limitations of the several activities listed below. Also, include any personal comments and recommendations for increasing the individual and group values we should strive for in Seminar II.

---

1. General Sessions:

---

2. Small Group Sessions:

---

3. Exhibits Section

---

4. Suggested Interim Activities (of value in planning by staff):

---

5. Other

Number item and write on back when more space is needed. All data will be treated strictly confidential and used only in summary form.

heard to remark, "He is the best I have heard." If other individuals are used to make presentations in general sessions, perhaps they could be asked to serve as "reactors" to concepts presented by Dr. Raths.

The persons conducting these sessions were great in talent. However, the staff was sensitive to the need for a change in the program and adjusted accordingly. Good job! I would like to hear a formal research presentation at the last seminar session.

The general sessions as a whole were very good. The only caution I would suggest is to be careful that consultants do not make talks on a level above the general comprehension of the group. Most of the group are neophytes in the research field and have not done any previous research.

Excellent. Discussions were quite stimulating. The instructor did an excellent job of interpreting the general sessions. More discussions on dissemination and utilization of research.

Good leader-good participation-most everyone joined the discussions at one time or another. Informal and this gave an atmosphere unrealistic to a classroom situation which was excellent. I believe much thinking was done under these conditions.

Small discussion groups were an important and valuable part of the seminar. In these small informal groups, we were able to discuss any questions we had and to relate and tie together the general sessions. I definitely think we should continue to have the small group sessions. However, it may be wise to regroup us according to the stage of development of our projects before our last session.

The exhibits section was a fine idea and I hope we will find much of the same equipment (and more) at the other seminars. Perhaps we could have some utilization of the materials and equipment on an assignment basis in our small groups.

Since my primary interest was in learning more specifically about basic educational research, I did not acquaint myself thoroughly with the exhibits. This is merely a suggestion, if time would permit it, to allow exhibitors a brief block of time to introduce and explain the features of their products and/or equipment.

I enjoyed the exhibits very much. I think it is valuable to have equipment and materials displayed throughout the meeting in a convenient location with representatives to explain and demonstrate the materials to those desiring more information. I hope everyone got around to examining the ERIC reports. I think they can be useful, and unless you look at an entire unit on a particular subject you don't realize how useful they can be.

This study in statistics and educational research is one in which I need considerable training and practice. The consultant and staff members are doing a superb job of making this serious discipline of educational research meaningful and valuable. This is important, for I am numbered with the group whose background and experience in this field is limited.

I believe that educational research will take a giant step forward in Kentucky because of the experiences we have had and will have during this seminar series. May I also congratulate you on your selection of the participants. All seemed intensely interested in learning about and doing educational research. It is a pleasure for me to have the opportunity to work with these type people.

I was pleased and impressed with the organization and direction of the first of the research seminar series. The schedule of activities was rigorous, but the quality of the instruction made for a pleasant, worthwhile experience even though I was quite tired at the end of the three days. I was particularly impressed with the flexibility of the activities. Your constant concern for the needs of the participants is to be commended.

Cumberland Falls was an excellent site at this time of year as it was free of possible distractions. The naturalist there did an excellent job. Also the Dupont Lodge staff was efficient and cooperative.

GENERALLY UNFAVORABLE

One panel-type session may give change in pace to meeting. Weakness: sessions were not lengthy but were tiring, maybe because of length of day and number of sessions.

Generally they were very helpful. However, some went too deeply for an amateur to grasp and understand.

In my opinion the small group sessions would be improved if participants or leaders were rotated. I would like to get better acquainted with all of our leaders in this field, and rotation would make this possible. Also, simple work assignments in the small groups might help keep these groups from losing sight of the objectives.

Strengths: opportunity to express and ask questions.
Limitations: leaders not following outlines-discussions going astray. Two or three dominating the discussion-one or two withdrew from group discussions.

The exhibits were excellent; however, if more companies had been represented with their equipment it might have created more interest. The exhibits should have stayed up longer.

Are we trying to put too much into three days? Perhaps longer breaks could relieve the fatigue which everyone was feeling.

My suggestion for improving the next two seminars is to lighten the schedule a bit. The pace at this first seminar was a bit rugged.

I may have sounded very critical of the seminar, but I do think it was a good and necessary experience. If we can possibly find time to read notes and our text before the next meeting we can possibly react more positively.

Allow some time for getting acquainted with other participants and staff members. Possibly we could have opening session on Wednesday night and leave open either Thursday night or Friday night.

The summary of the self-evaluation report of the second seminar is less lengthy than that for Seminar I indicating, perhaps, that many of the concerns had been reduced or eliminated. Moreover, a change in research behavior was evident as an increasing number of the participants realized that the goals of the research training program were within reach. As one participant put it, "I think we really were in the right direction in this session." The complete summary report for Seminar II is presented in Appendix D - 1.

As a concluding activity of the third seminar, the participants were requested to react to a rating scale (Appendix D - 2) consisting of 65 items selected from the program content and listed in random order. Values were assigned to the three-point scale as follows:

0-No Knowledge or Understanding
1-Limited Knowledge or Understanding
2-Understand and Use

The responses to the 65 items were machine processed and grouped for analysis into four categories corresponding to the major areas of program content.

RESEARCH TERMS AND CONCEPTS (20)

Strengths of research
Research design
Threats to research design
Limitations of research
Experimental research
Application of research
Literature search
Define a researchable problem
Sampling
Sampling bias
Requisites of a good sample
Stratified random sample
Proposal design
Selection of sampling technique
Prediction
Random sample
Population or universe
Types of research
Type I and II errors
Research hypothesis

MEASUREMENT TERMS AND CONCEPTS (15)

Reliability
Validity
Selection of measurement device
Concurrent validity
Content analysis
Rating scale
Nominal data
Semantic differential
Questionnaire
Sociogram
Ordinal data
Q-sort
Interaction analysis
Interval data
Ratio data

STATISTICAL TERMS AND CONCEPTS (18)

- Statistical test selection
- Correlation
- Significance
- Chi-square
- Null hypothesis
- Product-moment correlation
- Central tendency
- Statistical hypothesis
- Rank order correlation
- T-test
- Correlation theory
- Linear regression
- Variability
- Kruskal-Wallis test
- Sampling error
- Least squares
- Analysis of variance
- Probability theory

SOURCES OF INFORMATION (12)

- ERIC
- Microfiche
- Microfiche reader
- *Buros' Test Reviews*
- ERIC clearinghouses
- Regional educational laboratory
- *Research in Education*
- *Journal of Educational Research*
- *NEA Research Bulletin*
- Microfiche reader-printer
- *Handbook of Research on Teaching*
- *Encyclopedia of Educational Research*

An indication of the participants' general familiarity with the 65 research terms and concepts is provided in Table 3.

TABLE 3

PERCENTAGE DISTRIBUTION OF PARTICIPANTS' SCORES ON RATING SCALE

Program Content		Percentage of Ratings by Scale Value		
Major Areas	Items	0	1	2
Research Terms and Concepts	20	5%	62%	33%
Measurement Terms and Concepts	15	13	65	22
Statistical Terms and Concepts	18	13	66	21
Sources of Information	12	13	60	27

Scale: 0-No Knowledge or Understanding
1-Limited Knowledge or Understanding
2-Understand and Use

The participants' total scale score on the four program areas was transformed to standard scores with a mean of 50 and a standard deviation of 10. The normalized scores for 49 participants are shown in Appendix D - 3. While no comparable pre-test was run and the limitations of the rating scale are recognized, the post-seminar scores indicate satisfactory group progress in the light of program content, instructional emphases, and seminar objectives.

It is recognized that the final evaluation of the seminar series is in the future. A period of three to five years will be needed to determine the extent of its impact on stimulating the development and use of research in Kentucky school systems. The seminar series was a step forward but, indeed, only a beginning. The real test is going to be upon the extent to which further research training and systematic problem-solving are generated by it.

Recommendations to the U. S. Office of Education

The relationships and experiences of the Kentucky Department of Education in working with the U. S. Office of Education in regard to research training and research dissemination programs have been very satisfactory. The special services rendered have been most helpful at a time when the department has been reexamining its role and responsibility for assisting school districts in developing and utilizing research. Specific recommendations pertain to minor delimiting factors encountered in conducting the research seminar series and to the general inadequacy of funds appropriated by the Congress for research training programs.

The problem of insufficient lead time has been referred to previously. Effective short-term research training programs, in particular, require a minimum of five or six weeks for conducting an adequate recruitment program and avoiding conflicts in the scheduling of staff and facilities. In this project, the closing of the gap of some five weeks between approval by the Project Officer and approval by the Grants Officer would have solved most of the scheduling difficulties including the loss of grant funds which were budgeted for the planning session.

In response to the changing educational environment, there is an increasing need for further development of a research-oriented curriculum and the application of problem-solving techniques to administrative decision-making. The many new Federal programs calling for systematic data of a continuous nature and the use of evaluative research patterns have sharpened quite perceptibly the long-standing need for state and local research activities at varying levels on the research continuum. With traditional needs largely unmet, the new demands for qualified research, development, and diffusion personnel are expected to further widen the gap between the supply and demand of school researchers. An immediate question facing state and local school systems is, will the short supply of school researchers be further drained off by the new demands?

The critical nature of the shortage points to the urgent need for increased appropriations by the Congress for research training programs. With state and local agencies generally in a non-competitive position for attracting and holding qualified researchers, it is further recommended that the Office of Education give consideration to a higher priority in the allocation of research funds for short-term training programs, such as institutes and seminars.

PROGRAM REPORTS

Publicity

The announcement of the Research Seminar Program by the Superintendent of Public Instruction was released to the press, and radio and television stations, on November 1, 1966. Coverage by the Kentucky press and other media consists of 171 daily and weekly newspapers; 89 commercial radio stations, and 7 commercial television stations. On the same date, the State Department of Education announcement, brochure, and application form were mailed to all superintendents and supervisors of 200 public school districts, private and parochial school systems, and university laboratory schools. The announcement is shown in Appendix A; the application form, Appendix A - 1. As a reminder, a follow-up letter with enclosures was mailed one week later to approximately 300 school personnel. Further, the holding of the Seminar series was publicized on a special telecast over WKYT-TV, Lexington, November 12, 1966.

The report of the first Seminar was released to the press and other media on December 12, 1966 and was featured in the December issue of School News published by the State Department of Education, (see Appendix E - 2). The mailing list for the Department School News is approximately 6,000 addresses and includes all school administrators, public and private; all professional staff of State Department of Education, members of State Board of Education, and other State agencies; all county boards of education, all college and university presidents, deans, librarians; all Kentucky Educational Association leadership and staff personnel, local and state;

fifty state departments of education, commissioner and information officer; U. S. Office of Education, and a miscellaneous list.

The report of the second seminar was released to the press and other media on February 14, 1967 and was carried in the State Department of Education School News issue for February, 1967 (see Appendix E - 3).

Application Summary

a.	Approximate number of inquiries from prospective trainees (letter or conversation)	150
b.	Number of completed applications received	87
c.	Number of first rank applications (Applicants who are well-qualified whether or not they were offered admission)	80
d.	How many applicants were offered admission ?	66

Trainee Summary

a.	Number of trainees initially accepted in program	60
	Number of trainees enrolled at the beginning of program	60
	Number of trainees who completed program	50
b.	Categorization of trainees	
	1. Number of trainees who principally are elementary or secondary public school teachers	5
	2. Number of trainees who are principally local public school administrators or supervisors	50
	3. Number of trainees from colleges or universities, junior colleges, research bureaus, etc. (specify)	
	universities	4
	research bureaus	1

Program Director's Attendance

a. What was the number of instructional days for the program?	9
b. What was the percent of days the director was present?	100%

Financial Summary--(Note: This summary does not serve as a final financial report so amounts need not be exact.)

	Budgeted	Expended or Committed
a. Trainee Support		
1. Stipends	$ 8,100	$ 7,540
2. Dependency Allowance	0	0
3. Travel	1,800	1,896
b. Direct Costs		
1. Personnel	5,260	4,297
2. Supplies	250	305
3. Equipment	0	0
4. Travel	1,300	727
5. Other	0	0
c. Indirect Costs	0	0
	$16,700	$14,765

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Book

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Article

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COMMONWEALTH OF KENTUCKY
DEPARTMENT OF EDUCATION
FRANKFORT, KY. 40601

HARRY M. SPARKS
SUPERINTENDENT OF PUBLIC INSTRUCTION

Appendix A

November 1, 1966

The Kentucky Department of Education has received a research training grant under Title IV of the Elementary and Secondary Education Act to provide in-service preparation in school research activities for sixty central office or school personnel. The Department is anxious to help local districts organize for research services or augment existing programs.

The time schedule for the three seminars is planned on weekends and eight weeks apart so that participants can combine in the most advantageous way school time and personal time. The research grant will pay all instructional costs and reimburse participants $15 per day to cover expenses. Limited funds for travel are also available. The three seminars are developmental in nature -- each supplementing and reinforcing the other. The participant selected by the district or school will be requested to serve in a liaison capacity to federal and state agencies, educational institutions, and other research developments. The school district or the participant may call on the seminar staff for services in the interim period.

More detailed information is enclosed including an application form. Please indicate as soon as possible if your school district can participate.

Sincerely,

Harry M. Sparks

Harry M. Sparks
Superintendent of Public Instruction

Enclosures

Appendix A-1

RESEARCH TRAINING SEMINAR SERIES

Seminar I: December 1, 2, 3, 1966
Seminar II: February 9, 10, 11, 1967
Seminar III: March 30, 31, April 1, 1967

Kentucky Department of Education
State Office Building
Frankfort, Kentucky

APPLICATION

Name ______________________________ Sex: M F Age __________

Address ______________________________ Telephone ______________

____

Employer ______________________________ Telephone ______________

____

Education

Institution	Degree	Field	Date

Experience (last two positions only)

Employer	Duties

Please place a check mark under graduate or undergraduate if you have taken the following courses:

	Graduate	Undergraduate
Tests and Measurements		
Introductory Statistics		
Research Methods in Education		

Appendix A - 1 (Continued)

List other research training you have had including institutes or seminars.

Do you desire to enroll with one of the participating universities for course credit?

________ Yes ________ No

Date ____________________ Signature ____________________________

____________________________ ____________________________ ________

School District or Agency Superintendent Date

Mail application to: D. E. Elswick, Director
Division of Research
State Department of Education
State Office Building
Frankfort, Kentucky 40601

File Application or Indicate by Letter or Phone Desire to Participate by November 15, if possible.

Reservations should be made for Wednesday night, November 30, December 1, and December 2 since the first session starts at 8:00 a.m. on Thursday, December 1.

Appendix B

Research Seminar Participants

*Alexander, David, Classroom Teacher Bowling Green School District, Bowling Green, Kentucky

Archer, Jack, Principal Peaks Mill Elementary School, Frankfort, Kentucky

Adams, William Earl, Principal Toliver Elementary School, Danville City Schools, Danville, Kentucky

Allen, O. J., Superintendent Breckinridge County Schools, Hardinsburg, Kentucky

Anderson, Edwina, Supervisor Grayson County Schools, Leitchfield, Kentucky

Beasley, Jessie, Guidance Counselor Paducah Independent Schools, Paducah, Kentucky

Bigstaff, Maxine, Supervisor Montgomery County Schools, Mt. Sterling, Kentucky

Bird, Andrew, Superintendent Anderson County Schools, Lawrenceburg, Kentucky

Bolton, William W., Supervisor Bourbon County Schools, Paris, Kentucky

Brewer, Annabelle, Assistant Superintendent Lexington City Schools, Lexington, Kentucky

Burnette, Sylvia, Supervisor Harlan County Schools, Harlan Kentucky

Butler, Cortez, Guidance Counselor Metcalfe County Schools, Edmonton, Kentucky

Byrum, L. J., Supervisor Henderson County Schools, Henderson, Kentucky

Davis, John W., Guidance Counselor, Scott County Junior High School, Scott County Schools, Georgetown, Kentucky

Davis, Winifred, Supervisor Allen County Schools, Scottsville, Kentucky

Doherty, Eula Mae, Supervisor Murray City Schools, Murray, Kentucky

Dozier, Betty J., Supervisor Woodford County Schools, Versailles, Kentucky

Dunbar, Mary Ann, Supervisor Adair County Schools, Columbia, Kentucky

Fisher, W. B., Assistant Principal and Math Teacher, Jefferson County Schools, Louisville, Kentucky

**Frazier, Eugene, Supervisor Paintsville City Schools, Paintsville, Kentucky

Fuson, Shelvie, Assistant Superintendent and Supervisor, Middlesboro City Schools, Middlesboro, Kentucky

Garner, Ernest H., Supervisor Bowling Green Independent Schools, Bowling Green, Kentucky

Goad, Alvis, Supervisor Edmonson County Schools, Brownsville, Kentucky

Goff, Reathel, Principal Hart Memorial High School, Hart County Schools, Bardstown, Kentucky

**Gover, Robert, Superintendent Todd County Schools, Elkton, Kentucky

Graham, Milton, Director of Pupil Personnel, Nelson County Schools, Bardstown, Kentucky

Hale, Mildred, Supervisor Russell County Schools, Jamestown, Kentucky

Hall, William B., Superintendent London City Schools, London, Kentucky

**Hampton, Burnette, Principal Hacker Elementary Schools, Clay County Schools, Manchester, Kentucky

Appendix B (Continued)

Horrell, Billy B., Assistant Superintendent Bullitt County Schools, Shepherdsville, Kentucky

Johnson, Kathryn S., Supervisor Oldham County Schools, LaGrange, Kentucky

Keen, Mary Ann, Supervisor Cumberland County Schools, Burkesville Kentucky

Keuhne, Eugene, Assistant to Superintendent, Diocese of Covington, 21 East 11th Street, Covington, Kentucky

*Lashbrook, Frances A., Assistant Superintendent, Elementary Education, Owensboro City Schools, Owensboro, Kentucky

*LeMaster, Opal, Instructor in Education, Librarian in Lab School, Morehead State University, Morehead, Kentucky

Mahanes, Thomas E., Supervisor Fayette County Schools, Lexington, Kentucky

Martin de Porres, Sister, Supervisor Louisville Diocesan Schools, 435 South 5th Street, Louisville, Kentucky

Mays, Allie M., Supervisor Knox County Schools, Heidrick, Kentucky

Miniard, Vernon, Superintendent Monticello Independent Schools, Monticello, Kentucky

**McAfee, James Edward, Principal Mt. Sterling City Schools, Mt. Sterling, Kentucky

McCall, Roy H., Principal Harrodsburg City Schools, Harrodsburg, Kentucky

McIntire, Hillman, Psychometrist Owensboro City Schools, Owensboro, Kentucky

McNeil, Partick, Assistant Superintendnet Hopkins County Schools, Madisonville, Kentucky

McKnight, Eliza, Director of Curriculum, Russell Independent Schools, Russell, Kentucky

Appendix B (Continued)

Nolan, Ercel, Elementary Counselor Laurel County Schools, London, Kentucky

O'Bryan, Rev. Henry P., Principal Diocese of Owensboro, 1524 Parrish Avenue, Owensboro, Kentucky

Price, L. B., Supervisor Floyd County Schools, Prestonsburg, Kentucky

Perry, John A., Supervisor Whitley County Schools, Williamsburg, Kentucky

Ragland, Anna Lou, Supervisor Butler County Schools, Morgantown, Kentucky

Risner, Bueford, Superintendent Bath Counth Schools, Route 1, Jeffersonville, Kentucky

Rowe, Walter M., Supervisor Mercer County Schools, Harrodsburg, Kentucky

Russell, Eugene, Assistant Professor, College of Education Murray State University, Murray, Kentucky

Sanders, Charles E., Director of Research, Louisville City Schools, 506 West Hill Street, Louisville, Kentucky

*Schmidt, Sister M. Chrysantha, Supervisor Catholic School Board, Louisville, Kentucky

*Shelton, Terry, Teacher University School, Murray State University, Murray, Kentucky

Smith, Earl, Supervisor Hazard Independent Schools, Hazard, Kentucky

Smith, Leona W., Supervisor Henderson Independent Schools, P. O. Box 535, Henderson, Kentucky

Smith, Rubie E., Head Elementary Education Division, Education Department, Murray State University, Box 1095 U. Station, Murray, Kentucky

Appendix B (Continued)

*Wells, John, Assistant Professor of Education, Murray State University, Murray, Kentucky

Williams, Thomas Jr., Supervisor, Washington County Schools Springfield, Kentucky

Williams, Vebere, Counselor, Simpson County Schools, Franklin, Kentucky

**Wilson, Harry, Guidance Counselor, McCreary County Schools, Pine Knot, Kentucky

**Winkler, Thomas, Supervisor, Bell County Schools, Irvine, Kentucky

Wright, Edward, W., Principal, Daviess County Junior High School, Owensboro, Kentucky

Observers (One or more sessions)

England, John C., Title I Coordinator, Monroe County Schools, Tompkinsville, Kentucky

Figg, Mary, Senior Statistician, Department of Education, Frankfort, Kentucky

Meisburg, Jack M., Title I Coordinator, Louisville City Schools, Louisville, Kentucky

Nallia, William T., Coordinator, Federal Programs, LaRue County Schools, Hodgenville, Kentucky

Rayburn, Jo Nell, Supervising Teacher, Murray University School, Murray, Kentucky

VanHook, William, Title I Coordinator, Somerset City Schools, Somerset, Kentucky

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*New Appointment--Attended first seminar on own expense account.
**Training terminated after first seminar.

Participants By KEA Districts - 72*

District I	7
District 2	7
District 3	10
District 4	7
District 5	7
NKEA	1
CKEA	14
MCEA	5
UCEA	8
UKREA	1
EKEA	5

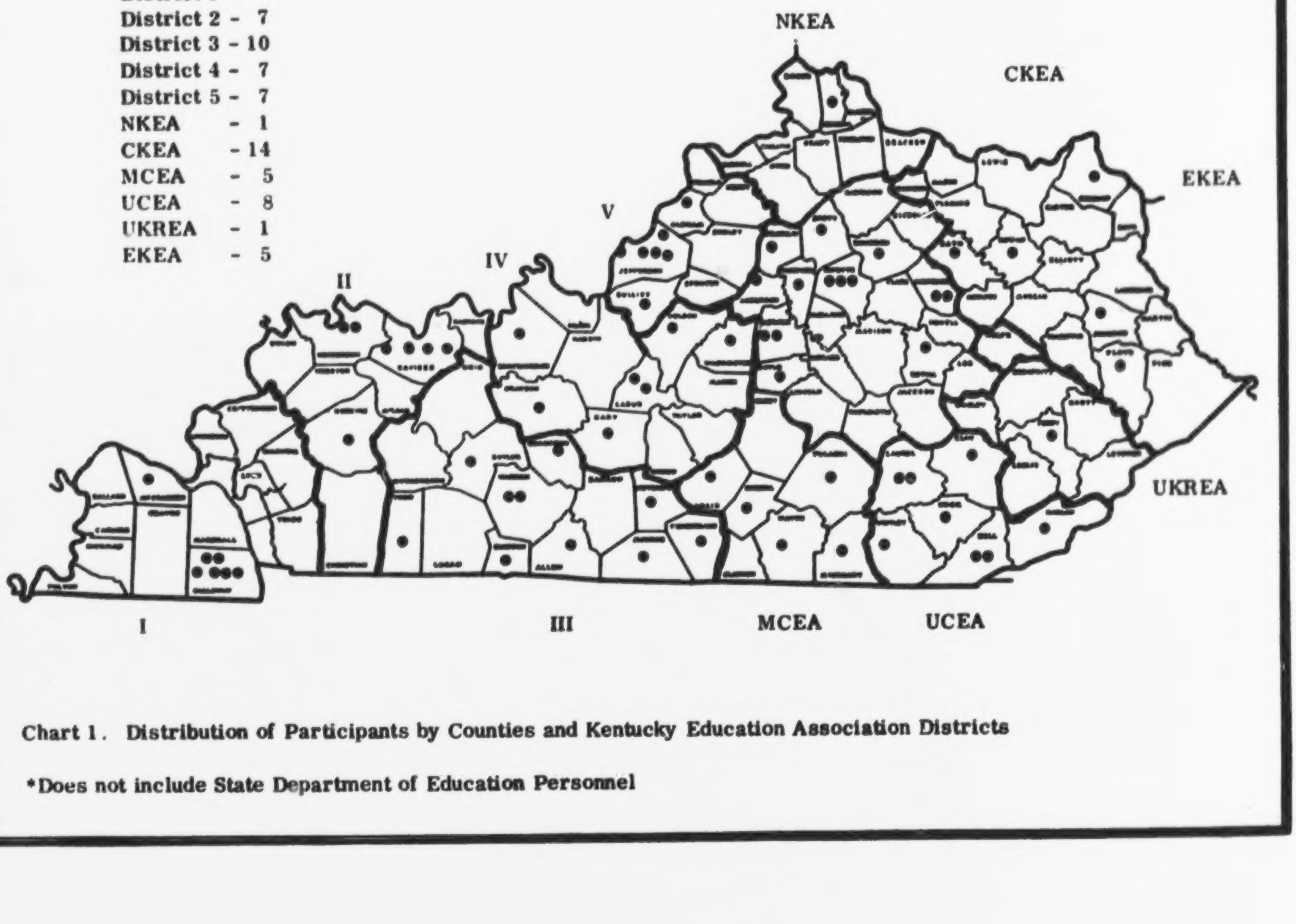
NKEA
CKEA
EKEA
V
IV
II
UKREA
I
III
MCEA
UCEA

Chart 1. Distribution of Participants by Counties and Kentucky Education Association Districts

*Does not include State Department of Education Personnel

Appendix C - 1

Copy

SCHEDULE OF ACTIVITIES

SEMINAR I - CUMBERLAND FALLS STATE PARK
DECEMBER 1 - 3, 1966

THURSDAY, DECEMBER 1

8:00 "State Department of Education and Local School District Cooperation in Developing an Interest and Concern for Educational Research" - Mr. Sam Alexander, Deputy Superintendent, Kentucky Department of Education

8:30 Plans for Conference - Director

9:00 First General Session - The Research Process

10:00 Break

10:30 Small Groups - The Research Process
Special attention to goals 1, 2, 7, 11

12:00 Lunch

1:00 Information Retrieval Systems (ERIC) - Exhibits Section

1:30 Second General Session - Threats to Research Design

3:00 Break

3:30-5 Small Groups - Research Design
Special attention to goals 3, 5

7:00-9 Third General Session - Research and Program Development
Report on Recent Research - Dr. Neill
Demonstration and Use of ERIC Program Materials

FRIDAY, DECEMBER 2

8:00 Fourth General Session - Measurement
(a) Reliability vs. Validity
(b) Types of Reliability

Appendix C - 1 (Continued)

Friday, December 2 - Continued

10:00	Break
10:30	Small Groups - Measurement Special attention to goals 8, 9, 10
12:00	Lunch
1:00	Exhibits - Individual Use of ERIC
1:30	Fifth General Session - Validity, Ways of Assessing
3:00	Break
3:30-5	Small Groups - Validity Buros' Test Reviews Which to select?
7:00-9	Reports of Recent Research (1) Dr. Russell (2) Dr. Norfleet

SATURDAY - DECEMBER 3

8:30	Sixth General Session - Problem Development and Solution Problems from explanations vs. problems from empirical viewpoint
10:00	Break
10:30	Small Groups - Problem Development Special attention to goals 4, 6, 12
12:00	Lunch
1-2:30	Summary - Evaluation of Conference - Staff Participants Closing Statement and Forward Look - Director

Appendix C - 2

Copy

TENTATIVE SCHEDULE OF ACTIVITIES
SEMINAR II - MAMMOTH CAVE NATIONAL PARK
February 8-11, 1967

WEDNESDAY EVENING, FEBRUARY 8

4:00 Registration

7-9:30 Banquet Session: "Research Strategy and Tactics for Advancing Education in Kentucky"

"Marshalling Resources" - Dr. Harry M. Sparks, Superintendent of Public Instruction

Guest Speaker - Dr. Wade M. Robinson, Executive Director Central Midwest Region Education Laboratory, St. Louis

THURSDAY, FEBRUARY 9

8:30 Second General Session - Dry Run Research Procedure

10:00 Break

10:30 Small Groups (As set up at Seminar I)
(1) Answer questions raised by large group experience
(2) Do a dry-run planned in advance by group leader. Problem would require a simple sort of analysis -- chi square, t-test, rank-order correlation, et cetera

12:00 Luncheon (Total Group)

1:30 Small Groups - Continue work on dry-run project

3:00 Break

3:30-5 Third General Session - Group report findings to total group

7:00-9 Small Groups open choice - Measurement alternatives

Appendix C - 2 (Continued)

Thursday, February 9 - Continued

Group A - Q-Sort*
Group B - Semantic Differential*
Group C - Content Analysis - Raths
Group D - Interaction Analysis - Norfleet
Group E - Questionnaires*
Group F - Other
Group G - Independent Study

*Staff member to be assigned

Staff members will present rationale for the measuring devices and several examples where appropriate. Also examples of researches using the instrument.

FRIDAY, FEBRUARY 10

8:30 General Session - The Null Hypothesis Model for Decision-Making

10:30 Break

11:00 Small Groups - Null Hypothesis
(1) Question and Answer Session
(2) Planning for P. M. (See starred item in p.m. session)

12:00 Luncheon (Total Group)

1:30-4:30 Small Groups** - to help participants work on their own projects

Track A	Track B	Track C	Track D
Problem Definition	Research Design	Statistical Analysis	Measurement

**Participants will choose the track they wish to take. The number of groups in each track will depend on the choices made by the participants in the morning planning session

7:00-9 Open Choice Session

Choice A - Chi-square test
Choice B - t-test
Choice C - Analysis of Variance
Choice D - Correlation
Choice E - Kruskal-Wallis Test
Choice F - (Independent Work)

Friday, February 10 - Continued

One staff member will be assigned to each choice. He will prepare a copy of a research report that makes use of the particular statistic. He will also suggest a dry-run problem that makes use of the technique and carry it out.

SATURDAY, FEBRUARY, 11

8:30 Small Groups - Choice of Tracks

Similar to Friday p.m. session. Participants may select the track group that best meets their needs.

10:30 Break

11:00-12 Planning Interim Activities - Summary and Adjournment

Appendix C - 3

Copy

SCHEDULE OF ACTIVITIES
SEMINAR III - MAMMOTH CAVE NATIONAL PARK
MARCH 29 - 31, APRIL 1, 1967

WEDNESDAY EVENING, MARCH 29

4:00 Registration -- Lobby of New Hotel

7-9:30 Banquet Session* -- Cooperative Development of Educational Research Programs with Emphasis on Meeting Needs of Local School Systems.

Presiding: Mr. Sam Alexander, Assistant Superintendent of Public Instruction.

Speakers: Dr. Harry M. Sparks, Superintendent of Public Instruction

Dr. Kenneth Estes, Superintendent, Owensboro School District.

THURSDAY, MARCH 30

8:30 Second General Session -- Sampling Designs in Education. Probability theory, population vs. sample study, requisites of a good sample, sampling procedures, bias in estimation, control of random sampling error, planning a sampling study, summary and analysis.

10:00 Break

10:30 Small Groups (as set up at Seminar I)
(1) Answer questions about large group experience
(2) Do a dry run sampling design for setting up a study -- planned in advance by group leader.

12:00 Lunch (total group - planned menu)

*Dinner Tickets Available at Registration Desk.

Appendix C - 3 (Continued)

Thursday, March 30-Continued

1:30 Third General Session -- The Problem of Prediction. Regression theory, relation to correlation theory, principle of least squares, application to test scores and school enrollment projection.

2:15 Small Groups
Questions and discussion about large group experience.

3:00 Break

3:30-5 Independent Study -- Special Help Session.
Participants work on individual projects. Consultants available in regular meeting places to assist on individual research projects.

7:30-9 Small Group (open choice) Literature Search and How to do it.
Discussion and analysis of a research study selected by group leader for the appropriate subject area with emphasis on importance of related literature.

Group A - Educational Administration
Group B - Curriculum and Instruction
Group C - Teacher and Teaching
Group D - Pupil and Learning
Group E - School and Community

FRIDAY, MARCH 31

8:00 Fourth General Session -- Dry Run Research Procedure Using Real Data. Problem Definition, research design, statistical analysis, measurement, interpretation of findings.

10:00 Break

10:30 Small Groups -- Answer questions on large group experience and help participants work on own projects.

12:00 Lunch (total group)

1:00 Sixth General Session -- Major Types of Research and Elements of Proposal Design Relevant to School Problems, Evaluate Criteria for Proposals.

Appendix C - 3 (Continued)

Friday, March 31-Continued

2:00 Small Groups -- Applicability of major types of research to local school problems. Elements of proposal design using proposal selected by group leader:

3:00 Break

3:00-5 Independent Study -- Special Help Session

7:00-9 Small Groups - (as set up at Seminar I) Review of Measurement Designs and Statistical Techniques. Assistance to participants on individual projects.

Q-Sort
Semantic Differential
Content Analysis
Interaction Analysis
Questionnaires
Rating Scales

Chi-square Test
t - test
Analysis of Variance
Correlation
Kruskal-Wallis Test
Rank-Order Correlation

SATURDAY, APRIL 1

8:00 Seventh General Session -- Strategy and Tactics for Developing School Research in Kentucky -- Consultant Panel.

10:00 Break

10:30-12 Summary, Evaluation, and Adjournment.

Appendix D - 1

Copy

(Verbatim statements of participants)

REPORT ON CONFERENCE EVALUATION BY PARTICIPANTS
Research Seminar II - February 8-11, 1967
Mammoth Cave National Park

1. Reactions and Recommendations - General Sessions

Very excellent and informative material - easy to grasp as Dr. Raths presented it in his very effective manner.

Very good!

I enjoyed Dr. Raths talks to the group sessions very much and felt that they were most helpful in preparing us for participation in the small groups. I have no suggestions or changes which I would recommend for the general sessions.

The topics dealt with in the general sessions of Research Seminar II were just about what I needed and they were handled in a most helpful manner. I feel that in Seminar III, if we can take an actual research problem from the group and work through it (as much in detail as is feasible) it might be very profitable to many of us.

The general sessions were very helpful and certainly an essential part of the program.

The general sessions were very informative - more understandable than Seminar I.

The general sessions were interesting and informative. Dr. Raths continues to be very outstanding. Smoking does not bother me, however, I heard some say that the smokers of pipes and cigars should be more considerate of others.

Very informative and helpful - panel discussion least helpful.

Appendix D - 1 (continued)

General Sessions (continued)

Continue as in the past two seminars.

Very good. Dr. Raths had a very effective manner of presentation. Reports from various groups indicated an enthusiasm and a personal involvement in activities at hand.

The general sessions were very well planned. They were more nearly geared to the needs of the total group. The banquet speaker was most inspiring but realistic in his approach.

The session I attended was very interesting. I am sorry that I was not able to be present at all sessions.

Dr. Raths is always good and I think the general sessions were more helpful than the small groups.

These sessions were very informative!

Very good. I believe we need to do more actual work on specific projects this time. We also need Dr. Raths as many times as possible.

Excellent - It's an honor to be invited to attend a seminar with such excellent leadership. There should be a big step forward in Kentucky as a result of these experiences.

Very strong. Definite aims were evident and were achieved in large degree. The intensiveness left some feeling very depleted and minds weary, but this is necessary if content is to be covered.

I felt that the general sessions were excellent, well executed and well planned. We need more of the same since most of us are neophytes in research. Some of it is still rather deep and over my head. I think we need a continuation in summer or fall.

Excellent!

The general sessions were most helpful in clarifying many questions concerning the group sessions. Dr. Raths was very informative and helpful throughout all general sessions. The dry run research was good.

8

General Sessions (continued)

Much improved over first meetings - or I was more attuned. The information reported was more basic and practical.

The general discussion should be kept strictly to the point of teaching us exactly what steps to take in doing a research project and how to carry this out in a simple way. Too much time was taken by bickering among some participants. Questions and answers were helpful to get the view points on research.

There was a marked improvement in the general sessions at Seminar II. We might have benefited from a little more time for questions from the floor when the small groups were reporting and after the panel discussion. If an hour and a half isn't enough time on Saturday morning for the consultant panel and questions maybe we could run into the scheduled break.

The schedule was greatly improved over the first seminar. I didn't get as tired and exhausted as previously. The Wednesday night session was definite improvement. I thought the panel discussion was most productive in bringing into the open genuine reaction to research in education. The staff as a group might conduct a panel as to their views on what actions could be taken on the local level. Then, to compare the experienced research person's views with the local level's views and maybe you can obtain what action the state should use next to promote research in Kentucky on the local level.

Excellent!

These as a whole were the most helpful. Especially the talks given by Dr. Raths.

These were full of interest and helpful in setting the stage for small group activities.

Much improved over Seminar I. Sessions moved rapidly. I had a better understanding of the material at this time so this made everything go better for me. I feel that I have learned a great deal at both Seminars as I had very little knowledge concerning research before.

Good.

Appendix D - 1 (continued)

2. Small Group Sessions

Very practical - particularly the session in which we did a "dry run". One session was beyond my comprehension and I felt the consultant was a little unsure of himself. More likely it was my own inadequacy.

The small group sessions were excellent. The consultants did a wonderful job. My only regret is that we could not attend all of them.

I think the small group sessions were most enjoyable during this second seminar in that our group as well as others, selected a problem and carried it through the various phases of research methods. The group knew each other better and thus had better overall participation.

The small group sessions were again well carried out. I learned, too, that switching to different groups made these sessions even better. I hope that in Seminar III we can work on details of actual research problems. I particularly want to learn how to use the random sampling tables.

If the theme of each general session could have been discussed more fully in the small group session that immediately followed, learnings could have been more easily reinforced. This procedure was very helpful when followed.

Favor the choice given at the second session to attend more than the one small group session to which we were previously assigned.

Too much material was presented in these small group sessions. It seems that the lack of coordination and structure was evident.

Enjoyed the research problems we did. I believe the practical solving of problems helped very much.

Very good in most of them but some of the information was very badly mixed up when we didn't get it explained to us. It was hard to tell what came next.

Dry-run was good practical experience, but effectiveness was reduced by interruptions from other groups gathering information. "Open choice" is a good idea, but would suggest making adding machines and calculators available to speed up the process.

Small Group Sessions (continued)

Our small group sessions were better this time. The leader was able to go slower and help us to better understand the process we were trying to learn. I liked the idea of special interest groups.

No change in organization.

I think we really were in the right direction in this session. I really enjoyed working on a specific project and finding the results.

Very good.

Good.

Sessions were helpful.

Sometimes the consultant gave too much for the participants to follow through with the activities. More time was needed.

Interferences by groups getting data were disturbing. More time could have been spent in working on research problems that were presented by the group.

Most consultants very helpful.

Some very good. One group, unfortunately, has been exposed to several types of leadership. All persons concerned were capable as individuals, but group progress lacked continuity that may have been accomplished through single leadership.

Being given a choice of problem approaches and tracks in the small group meetings was an especially nice arrangement. Getting to know the different group leaders a little better was rewarding to say the least.

It was a very good experience to go through a dry-run project and thus be able to apply the mechanics of research.

Some of the consultants were given assignments on short notice and were not able to do as good a job as others.

Disappointing when leader opens with "What do you want to talk about?"

Appendix D - 1 (continued)

Small Group Sessions (continued)

I attended another group and was helped tremendously. Some people try to dominate direction of leaders by talking too much.

The group session in which I worked was very strong. I have heard comments that reveal a rather wide difference in the way group sessions were handled. Mine, for instance seemed to cover more and in much more depth than one other, possibly more. After coming away, however, there is the feeling that much was gained while there, but not the ability to proceed with the research problem independently. There was much interruption of the groups for research activities on the first day.

Most of these were well planned. However, some of the leaders seemed to be un-sure of themselves at times. I feel that the leaders should take charge and give us what we need - not let individuals monopolize.

Dr. Neill helped me very much in the small group sessions. Changing groups had advantages, but it also had some disadvantages. It was good to get different ideas from different staff members but it did change your train of thinking.

Dry-run especially practical opportunities to choose sessions were valuable. The interest of the leaders was gratifying.

I like the provisions that were made to meet in small groups in an interest area.

Group 1 had no continuity - other group sessions were excellent.

Part of my small group sessions were quite helpful and some moved too rapidly in doing formulas, until I left confused and did not thoroughly understand what we were doing. I would like more specific information just how to carry out a research project in my school system.

I would like to have participated with more of staff in the small group sessions than I was able to this time. I have no suggestions as to how this could have been accomplished. I just could not seem to get around to all the sessions I would like to have attended. The dry-run project was very informative and stimulating.

The small group sessions which I have attended too often began at a level beyond the comprehension of the participants.

Small Group Session (continued)

Some very pertinent factors in our local situations were discussed. We also were able to develop more fully and understandingly the concepts that were presented in general sessions.

I especially liked the session where we made the dry-run of a research problem. Everyone participated and this provided a good learning situation.

Suggested Activities between Seminars--For example: What field services can Consultants render? What information can State Department provide? Other Activities.

I would like some help in interpreting data which I have gathered for a simple research project. The remainder of activities I will leave to the discretion of our most able planning group.

I felt that the evening sessions were very good.

We would like to have someone from the State Department work on a Title I, ESEA evaluation

It is most encouraging to know that the consultants will be available to assist with the research projects to be carried out at the local level.

Don't rightly know, but feel that some kind of contact should be maintained.

Let's have a general session which will give us specific information concerning what the State Department can do for us!

Consultants could visit local districts and work with research problems being carried on.

I would welcome a visit from some one from the State Department staff or the group leader. Dr. Morris Osburn, Director of the Human Relations Center for Education, located at Western Kentucky University has some interesting slides and a talk about some research done with a group of children and teachers that may be of interest to the group at a Banquet type meeting.

Provide us with any information they have on research.

Suggested Activities between Seminars (continued)

1. Activities between school systems in the nature of survey; e.g. sick leave in Breckinridge County as compared to the same in another system.
2. Relating programs in different systems as to the effectiveness of the program; e. g. growth of head start children as compared with a previous class.

I need help in understanding the statistics we're covering in the meetings. We would like to get together with others in the area to share our ideas.

The State Department could be of great service by giving help to districts in analyzing data (computer service).

One night off with nothing particularly planned except perhaps a social hour.

It seems if consultants could meet with participants in certain areas, it would be most helpful.

Help in identifying a problem.

Following the third session, I feel that I may need some help for I want to try some local research.

A time for individual help from consultants to assist people who desire help to work on identifying a problem that is worth researching and to help the individual follow through in setting up research design.

Set up district meetings for groups to come together and follow through with activities presented at seminar sessions.

The material that has been sent out by the State Department has been helpful. Continue to do this.

Provide consultant over a period of years to continue projects that individuals have begun.

Send materials and information requested. Offer consultative services. Offer leadership for in-service program planning with research problems in mind.

Appendix D - 1 (continued)

Suggested Activities (continued)

I think you should ask for additional funds to extend field services to participants on an individual basis for at least the next school year. We are not far enough along at the end of Seminar II to use these services effectively. Let's complete a research project.

Consultants could be available to those school districts where research problems have been identified and actual research has been initiated. Visitation in the local district to work with the local personnel, communication by phone or correspondence, and provision of "moral support" would be some ways that I see of using this service. The State Department could keep local school districts better advised as to the latest research on curriculum problems, school finance, better use of school facilities.

I plan to have a consultant come into my school to help teachers understand what is meant by research and possibly set up some simple research projects. There is a possibility this will be done with more than one school system involved.

I am bogged down with my small research because I don't know where to go from here and haven't enough consultative help. This help needs to come from people who speak the language we have learned at Seminar II. In other words, I know how to do Chi Square and some other techniques, but I do not know when to use them, when they are not the thing to use and how to interpret results. My colleagues here are busy, are not in on our way of working. Yet I am more fortunate than some because I am on a university campus. There is great need of some two and three-hour work sessions in small groups at home if we are to move ahead.

Work with us at the local level and have district meetings-so that our administrators can be convinced of this need for research and relieve us of some other duties if necessary to do so.

There are several participants who are at present beginning some research activities. These people are nearing a point at which the consultants can be of valuable assistance in giving suggestions for next steps.

Will they be available in the future to give us help if and when we are working on projects.

Appendix D - 1 (continued)

Suggested Activities (continued)

Participants should follow through on most relevant projects which districts have initiated. As time permits each of these participants should share their findings, and interests with fellow participants.

4. Other

I am grateful for having the opportunity to participate as a trainee in this program.

Cave trip was enjoyable and provided a much needed break in activities. I hope that some activity will be planned for Seminar III.

I would like to have another banquet either on Wednesday night or Friday night and Dr. Sparks should be invited to speak. I enjoyed the cave trip. Would it be possible to go another route?

The second session was the most beneficial seminar that I have had the opportunity to attend.

I have no suggestions for improvements. The seminars have been well organized with very competent personnel serving as consultants. This has been a most rewarding experience.

I felt the need at the last seminar for free - individual conferences with consultants to answer specific questions.

Organization much better than first seminar.

A suggestion for next seminar - time provided to work individually with staff members.

Perhaps a few words on pitfalls to avoid in gathering data or even tackling a project. Some problems are not researchable, but this sometimes not apparent until much time and energy has been expended.

1. Districts may combine efforts and have some area projects.
2. In Seminar III more time given to individual assistance would be helpful.

Seminar II was highly interesting in both general sessions and small

Other (continued)

group sessions but neither seemed to head anywhere. Staff planning was not reflected. I did not receive any assistance on my problem. All measurement alternatives were well presented and helpful but I didn't have a basis for deciding which ones I needed to attend. I think the ideas presented were sound and probably relevant but activities were too general.

I want to thank you Dr. Elswick, for reassuring me and urging me to continue on with this program.

The State Department needs to stress the need for personnel on the local level who can do this research and make it meaningful for the staff involved. This person should do research and not 1001 other jobs.

I would like for a group of teachers or others who have done research in their local systems to be invited to share it with us, how they initiated the research, carried it out and the results.

We've been out of school a week and I'm sorry this is late. I have no suggestions for I thoroughly enjoyed the sessions of seminar II. Our only problem was the consultant shift and we discussed that with you.

These kinds of activities have surely been well planned and fruitful of better understanding and high level of interest in promotion of research locally.

Appendix D - 2

Copy

EVALUATION FORM

Educational Research Seminar Series-1967
Kentucky Department of Education

Seminars attended (circle 2 or 3) Position______________

On the following three-point rating scale, please rate in the appropriate column the extent of your knowledge and understanding of the following significant research and statistical terms and concepts.

Significant Research and Statistical Terms and Concepts	Extent of Knowledge or Understanding		
	No Knowledge or Understanding	Limited Knowledge or Understanding	Understand and/or use
1. Strengths of research	______	______	______
2. ERIC	______	______	______
3. Research Design	______	______	______
4. Use of research at local level	______	______	______
5. Threats to research design	______	______	______
6. Limitations of research	______	______	______
7. Research hypothesis	______	______	______
8. Experimental research	______	______	______

Appendix D - 2 (continued)

Significant Research and Statistical Terms and Concepts	Extent of Knowledge or Understanding		
	No Knowledge or Understanding	Limited Knowledge or Understanding	Understand and/or use
9. Microfiche	_____	_____	_____
10. Reasons for literature search	_____	_____	_____
11. Reliability	_____	_____	_____
12. Define a researchable problem	_____	_____	_____
13. Reasons for statistical test selection	_____	_____	_____
14. Microfiche reader	_____	_____	_____
15. Validity	_____	_____	_____
16. Correlation	_____	_____	_____
17. Buros' Test Reviews	_____	_____	_____
18. ERIC clearinghouses	_____	_____	_____
19. Statistical significance	_____	_____	_____
20. Selection of measurement device	_____	_____	_____
21. Chi-square	_____	_____	_____
22. Null hypothesis	_____	_____	_____
23. Regional educational laboratories	_____	_____	_____
24. Concurrent validity	_____	_____	_____

Appendix D - 2 (continued)

Significant Research and Statistical Terms and Concepts	Extent of Knowledge or Understanding		
	No Knowledge or Understanding	Limited Knowledge or Understanding	Understand and/or use
25. Research in Education			
26. Product-moment correlation			
27. Content analysis			
28. Rating Scales			
29. Nominal data			
30. Measures of central tendency			
31. Statistical hypothesis			
32. Sampling			
33. Semantic differential			
34. Questionnaire construction			
35. Rank order correlation			
36. t-test			
37. Sociogram			
38. Ordinal data			
39. Correlation theory			
40. Journal of Educational Research			

Appendix D - 2 (continued)

Significant Research and Statistical Terms and Concepts	Extent of Knowledge or Understanding		
	No Knowledge or Understanding	Limited Knowledge or Understanding	Understand and/or use
41. Sampling bias	_____	_____	_____
42. Linear regression	_____	_____	_____
43. Proposal design	_____	_____	_____
44. Requisites of a good sample	_____	_____	_____
45. NEA Research Bulletin	_____	_____	_____
46. Probability theory	_____	_____	_____
47. Q-sort	_____	_____	_____
48. Stratified-random sample	_____	_____	_____
49. Kruskal-Wallis test	_____	_____	_____
50. Selection of sampling technique	_____	_____	_____
51. Microfiche reader-printer	_____	_____	_____
52. Interaction analysis	_____	_____	_____
53. Interval data	_____	_____	_____
54. Sampling error	_____	_____	_____
55. Prediction	_____	_____	_____
56. Handbook of Research on Teaching	_____	_____	_____

Appendix D - 2 (continued)

Significant Research and Statistical Terms and Concepts	Extent of Knowledge or Understanding		
	No Knowledge or Understanding	Limited Knowledge or Understanding	Understand and/or use
57. Random sample	______	______	______
58. Population or universe	______	______	______
59. Least squares method	______	______	______
60. Analysis of variance	______	______	______
61. Ratio data	______	______	______
62. Encyclopedia of Educational Research	______	______	______
63. Types of research	______	______	______
64. Measures of variability	______	______	______
65. Type I and Type II errors	______	______	______

Appendix D - 3

POST-SEMINAR SCORES OF PARTICIPANTS ON KNOWLEDGE AND UNDERSTANDING OF RESEARCH TERMS AND CONCEPTS BY MAJOR PROGRAM COMPONENTS

Trainee	Equivalent Standard Scores					
	Statistical Concepts (18)	Research Concepts (20)	Measure-ment Concepts (15)	Sources of Information (12)	Total Z Score (65)	Mean Z Score
1	52	50	51	57	210	52.5
2	59	52	51	65	227	56.8
3	43	44	45	43	175	43.8
4	39	50	41	39	169	42.3
5	48	50	49	54	201	50.3
6	48	57	57	57	219	54.8
7	54	70	65	48	237	59.3
8	48	44	39	39	170	42.5
9	46	46	41	50	183	45.8
10	50	48	53	54	207	51.8
11	50	39	47	37	173	43.3
12	43	56	47	48	194	48.5
13	46	57	59	54	216	54.0
14	45	43	45	39	172	43.0
15	50	39	47	72	208	52.0
16	57	54	57	57	225	56.3
17	52	41	45	41	179	44.8
18	57	50	51	52	210	52.5
19	45	41	47	41	174	43.5
20	77	74	63	65	279	69.8
21	43	56	51	59	209	52.3
22	57	63	61	70	251	62.8
23	41	56	47	52	196	49.0
24	34	48	43	50	175	43.8
25	46	52	51	59	208	52.0

Appendix D - 3 (Continued)

Trainee	Equivalent Standard Scores					
	Statistical Concepts (18)	Research Concepts (20)	Measure-ment Concepts (15)	Sources of Information (12)	Total Z Score (65)	Mean Z Score
26	54	54	55	67	230	57.5
27	52	44	55	48	199	49.8
28	41	31	39	33	144	36.0
29	64	61	63	48	236	59.0
30	41	43	41	43	168	42.0
31	64	50	59	52	225	56.3
32	52	46	51	43	192	48.0
33	52	39	53	52	196	49.0
34	43	35	43	52	173	43.3
35	37	35	37	26	135	33.8
36	39	41	34	41	155	38.8
37	41	50	47	48	186	46.5
38	45	39	45	41	170	42.5
39	59	61	47	41	208	52.0
40	70	69	73	61	273	68.3
41	45	44	45	46	180	45.0
42	55	50	45	50	200	50.0
43	43	41	32	43	159	39.8
44	36	35	24	37	132	33.0
45	45	37	47	46	175	43.8
46	71	59	69	61	260	65.0
47	52	56	57	50	215	53.8
48	50	50	51	67	218	54.5
49	80	70	75	61	286	71.5
Mean	50	50	50	50	-	-
S. D.	10	10	10	10	-	-

Appendix E - 1

Copy

(Announcement that was distributed)

EDUCATIONAL RESEARCH SEMINAR SERIES

Sponsored by
THE KENTUCKY DEPARTMENT OF EDUCATION

in cooperation with the

United States Office of Education
under Title IV of the
Elementary and Secondary Education Act
of 1965

Sequential Series -- Same Participants

Seminar I: December 1, 2, 3, 1966
Seminar II: February 9, 10, 11, 1967
Seminar III: March 30, 31, April 1, 1967

Under provisions of Title IV of the Elementary and Secondary Education Act, the Kentucky Department of Education has been awarded a research training grant to conduct three 3-day seminars in a developmental series with consultant services provided the participating school districts in the interim periods.

Purpose of the Program

The special training project is designed to provide short but intensive instructional and workshop experiences which can be implemented by existing staff personnel. The seminars will be directed toward the research needs of Kentucky's instructional supervisors and a cross-section of administrative and teaching personnel who have important leadership roles in providing for the educational program in Kentucky school districts.

The developmental series will focus on the more common research needs of the school district, such as:

- Organizing for research
- Developing personnel
- Utilizing research
- Upgrading research methodology
- Establishing a planned strategy for educational change

Some of the specific behavioral objectives have the common purposes of preparing the participants to:

1. Conduct pilot testing of new practices and materials.
2. Make optimum use of existing data to interpret the school program utilizing research methodology.
3. Adopt and interpret available knowledge of educational practices for practitioners.

Limited Enrollment

Facilities and funds will limit participation to 60 persons on stipend--one per district making application. A few additional persons can be accommodated on an observer basis. Applications from school districts in excess of 60 will indicate to the Department of Education the need to plan and hold additional seminars.

General Selection Criteria

- Applicants should have a Master's Degree and a minimum of two years of successful teaching or administrative experience.
- Official endorsement of school districts desirous of initiating or augmenting a local research program full time, part time, or to assign coordination of research services in a district or in a school to a staff member as part of regular duties.
- Applicants are currently enrolled in a formal program for preparation of educational researchers supported by Title IV funds.

Appendix E - 1 (continued)

Time and Place

The dates for the developmental series are:

Seminar I - December 1, 2, 3, 1966

Seminar II - February 9, 10, 11, 1967

Seminar III - March 30, 31, April 1, 1967

In the interim periods between seminars, the instructors and department staff participating in the seminar program will be available for follow-up and supervision of projects undertaken, local workshops, and small groups or individual consultation as requested by participants.

The place for Seminar I -- Cumberland Falls State Park. Renovation plans there will require a new location for Seminars II and III. Tentative second location -- Mammoth Cave National Park.

Instructional Staff

Principal Consultant: Dr. James D. Raths, Director, Bureau of Educational Research and Field Services, University of Maryland. Director: Dr. D. E. Elswick, Division of Educational Research, Kentucky Department of Education. Instructors: Dr. R. Dean Acker, Director of Research, Eastern Kentucky University; Dr. Donald J. Clemens, Coordinator, Teacher Education and Special Programs, Murray State University; Dr. Henry N. Hardin, Director, Educational Research and CEMREL Branch Office, Western Kentucky University; Dr. Robert D. Neill, Assistant Professor of Education, University of Louisville; Dr. Morris L. Norfleet, Director of Research and Development, Morehead State University; Dr. Ivan C. Russell, Associate Professor of Education, University of Kentucky.

Stipend

A stipend of $15 per day is available to pay participant's cost of living accommodations. Cost of travel will be reimbursed within limits of travel funds in budget.

Appendix E - 2

Copy

Kentucky Department of Education

School News

Education - A Firm Foundation Official Publication

Volume 5 No. 4 Frankfort, Ky. December, 1966

FIRST RESEARCH SEMINAR HELD

On December 1-3, 1966, the first of three 3 - day educational research seminars was held at Cumberland Falls State Park. The project funded by the U. S. Office of Education under a Title IV research training grant is sponsored by the State Department of Education Commission of the Kentucky Association of Supervision of Curriculum Development.

The grant award of $16,710 provides for sixty participants but the interest manifested by school districts and the twelve additional participants who asked to be included at their own expense is a strong indication that more opportunities of this type should be made available in the future. As predicted in the planning stage of the project, the location also made a contribution.

The Program

The program for Seminar I featured the following activities:

An address by Mr. Sam Alexander, Deputy Superintendent, Kentucky Department of Education, "State Department of Education and Local School District Cooperation and Developing an Interest and Concern for Educational Research."

General sessions conducted by Dr. James D. Raths, principal consultant, University of Maryland, were direct toward these basic components: the research process, threats to research design, measurement, ways of assessing validity, and problem development and solution.

Appendix E - 2 (continued)

Applicants

A brief analysis of applications of all participants reveals the following enrollment data: representatives of county school districts, 40; independent districts, 21; universities and laboratory schools, 6; Catholic school boards, 4; State department, 3; and other, 1. Participants by KEA districts were distributed as follows: District I, 7; II, 7; III, 10; IV, 7; V, 8; CKEA, 16; EKEA, 5; MCEA, 5; NKEA, 1; UCEA, 8; UKREA, 1. In addition, the instructional staff accounted for 7, and state department administrative staff, 4.

Interim services are built into the program and are, in a real sense, preparatory to Research Seminar II which will be held February 9-11, 1967, at Mammoth Cave National Park.

The instructional leaders from across the State were in general agreement that Cumberland Falls State Park snuggled deep in the heart of the newly-named Daniel Boone National Forest truly provided a "retreat" type setting for a work conference on research training and development.

Discussion Groups

The general session was followed with discussion and interpretation by small groups led by the instructional staff consisting of Dr. Morris Norfleet, Morehead State University, Group I; Dr. Robert D. Neill, University of Louisville, Group II; Dr. R. Dean Acker, Eastern Kentucky University, Group III; Dr. Donald Clemens, Murray State University, Group IV; Dr. Henry Hardin, Western Kentucky University, Group V; and Dr. Ivan Russel, University of Kentucky, Group VI.

Position-wise the 75 participants are as follows: instructional supervisors, 27; superintendents or assistant superintendents, 12; principals or assistant principals, 9; guidance counselors, 7; university and laboratory personnel, 6; coordinators, federal programs, 5; state department personnel, 3; other, 6.

Not included in the above are seven instructional staff and four state department of education administrative staff.

Appendix E - 3

Copy

Kentucky Department of Education

School News

Education - A Firm Foundation Official Publication

Volume 5 No. 6 Frankfort, Ky. February, 1967

SECOND RESEARCH SEMINAR HELD

The second of three 3-day educational research seminars was held on February 8-11, 1967 at Mammoth Cave National Park. The seminars, supported by a U. S. Office of Education Title IV (P. L. 89-10) grant, are jointly sponsored by the State Department of Education and the Research Commission of the Kentucky Association of Supervision and Curriculum Development.

The continuing interest in the sessions was indicated by the school districts as 55 of the original 60 participants returned to the second seminar. Inclement weather kept the other 5 from attending. Eleven additional participants, 9 from school districts and 2 from State Universities, attended. State Department personnel in attendance were Claude Taylor, Mary Marshall, Mary Figg, George Rush, Billy Braden, and Charles Bratton.

The Program

The Seminar II program consisted of the following activities:

The banquet session featured an address by Dr. Wade M. Robinson, Executive Director, Central Midwest Regional Education Laboratory who outlined "Research Strategy and Tactics for Advancing Education in Kentucky." This address was taped and will be made available in mimeographed form at a later date. Dr. Robinson was the surprised recipient of a Kentucky Colonelcy. Dr. Raymond Cravens, Vice President for Academic Affairs, Western Kentucky University, made the presentation.

The original project staff again conducted the seminar: Dr. D. E.

Appendix E - 3 (continued)

Elswick, State Department and Project Director, Dr. James D. Raths, Principal Consultant, University of Maryland, Dr. Don Clemens, Murray State University, Dr. Ivan Russell, University of Kentucky, Dr. Henry Hardin, Western Kentucky University, Dr. Robert D. Neill, University of Louisville, Dr. R. Dean Acker, Eastern Kentucky University, and Dr. Morris Norfleet, Morehead State University.

Dr. Raths conducted the general sessions which focused on a "dry run" research procedure, measurement, the null hypothesis, and statistical techniques.

The last general session was a panel composed of representatives from the school districts who discussed research needs in local school districts.

Mammoth Cave will again serve as the site for Seminar III which is scheduled for March 29, 30, 31, and April 1. Dr. Elswick, Project Director, is expecting a full quota of participants at this final session.